

Electrode arrangements for generating functional field
barriers in microsystems

ABSTRACT

In an electrode arrangement in a microsystem equipped for dielectrophoretic manipulation of particles in a suspension liquid in a channel, with at least one microelectrode being arranged on a lateral wall of the channel for generating a field barrier along a reference surface which covers the channel at least partly, the microelectrode has a predetermined curvature or predetermined angles in relation to the direction of flow in the channel so that the reference surface has a predetermined curvature relative to the direction of flow. According to one embodiment of the invention the particle movement in the microsystem takes place under the influence of centrifugal forces and/or gravitational forces.

(Fig. 1a)